

LA SALLE COLLEGE

PHILADELPHIA, PA.




CATALOGUE

LA SALLE COLLEGE

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THE COLLEGE CALENDAR

- SEPTEMBER . . . Last Thursday, general assembly of all college classes, 10 A. M.
Monday following assembly, all classes begin.
- OCTOBER Twelfth, Columbus Day, Recess.
- NOVEMBER First, All Saints, Holy Day.
Eleventh, Armistice Day, Recess.
Thanksgiving Recess.
Monday following Thanksgiving Day, classes resumed.
- DECEMBER Eighth, Immaculate Conception, B. V. M. Holy Day.
Twenty-first, Christmas Recess begins.
- JANUARY Fourth, classes resumed.
Twenty-fifth, mid-year examinations begin.
- FEBRUARY Fourth, second term begins.
Twenty-second, Washington's Birthday, Recess.
- APRIL Monday of Holy Week, Students' Retreat begins.
Wednesday of Holy Week, Retreat closes and Easter Recess begins.
Wednesday of Easter Week, classes resumed.
Fifteenth, final day for reception of theses.
- MAY Fourteenth, "Hey-Day," class exercises in the afternoon.
Fifteenth, Feast of St. John Baptist de La Salle, Founder, Recess.
Sixteenth, Prize Essays and Essays for Oratorical Contest submitted for final evaluation.
Ascension, Holy Day.
Twenty-fifth, Final examinations begin.
- JUNE First Sunday, Commencement Exercises, 8 P. M.

HISTORY

In 1863, the late Most Reverend James Frederick Wood, D. D., then Bishop of Philadelphia, in conjunction with a committee consisting of Christian Brothers, Reverend Clergy and laymen, obtained from the State of Pennsylvania a charter incorporating La Salle College in Philadelphia.¹

Their aim was to supply within the limits of Philadelphia the need of a College for higher Catholic education.

The nucleus of La Salle College had already been formed in September, 1862, as the Christian Brothers' Academy attached to St. Michael's Parochial School, at 1419 North Second Street. When the number of students became too large for the accommodations afforded by the building on Second Street, the property at the northeast corner of Filbert and Juniper Streets was purchased in 1867, and the classes continued there until June, 1886.

Owing to the constant increase in the number of pupils, the College was forced to seek for a more commodious site. The Bouvier Mansion on Broad Street, above Girard Avenue, was acquired in December, 1882. In the following September the academic and preparatory departments of the College were transferred thither, and on the completion of the school buildings the collegiate and commercial departments were removed to their present location.

¹ An act to incorporate La Salle College in the City of Philadelphia, Pa., approved March 20, 1863.

In June, 1926, a tract of land was purchased for the site of the new buildings of La Salle College located at Nineteenth Street and Olney Avenue.

APPLICATION FOR ADMISSION

Every candidate for admission should file an application on a blank provided for that purpose. Copies of that blank may be obtained by writing to the Registrar, La Salle College, Philadelphia, Pa.

The College would be pleased to receive applications from prospective students two, or even three, years before they expect to enter. It is recommended that application blanks be filed early, in order that they may receive prompt attention.

ENTRANCE REQUIREMENTS

To be admitted as a regular student in the Freshman Class a candidate for admission must obtain credit as follows:

1. A total of 15 units in acceptable college preparatory subjects.

2. Of the 15 units at least $11\frac{1}{2}$ units must be in subjects in the following list: English, Mathematics, History, Economics, Foreign Languages, and the Sciences: Physics, Chemistry, Biology, Botany, Zoology, Physical Geography and Physiology.

3. The 15 units must include the following:

English 3 units

History 1 unit

Algebra 1 unit

Plane Geometry 1 unit

Foreign Language 3 or 4 units

If but one foreign language is offered, the minimum requirement will be: In Latin, 4 units; in Greek, 3 units; in French, 3 units; in German, 3 units; in Spanish, 3 units. If two languages are

offered, the minimum requirements will be two units in each language.

The unit used above is the usual college entrance unit.

SUBJECTS ACCEPTED FOR ADMISSION

The numbers of units indicate respectively the minimum and maximum number that will be accepted.

English 3 to 4 units

To obtain credit in English, the candidate must have completed the full requirement as prescribed by the National Conference on Uniform Entrance Requirements in English.

History and Civil Government.. 1 to 4 units

Not more than 3 units of credit in History can be obtained by examination.

Economics $\frac{1}{2}$ to 1 unit

Latin 2 to 4 units

Greek 2 to 3 units

French 2 to 4 units

German 2 to 4 units

Spanish 2 to 4 units

Algebra 1 to 2 units

Geometry 1 to $1\frac{1}{2}$ units

Trigonometry $\frac{1}{2}$ unit

Science, including Physics, Chemistry,

Biology, Botany, Zoölogy, Physical

Geography and Physiology

$\frac{1}{2}$ to 4 units

Miscellaneous Subjects. $\frac{1}{2}$ to $3\frac{1}{2}$ units

To obtain credit in Algebra, Quadratics must be included.

Under the head of Miscellaneous Subjects may be included any subject counted by the candidate's secondary school as a part of the requirement for its diploma, provided the Registrar is satisfied that its subject-matter has been properly organized for college preparatory work and that it has been taught by a competent teacher and with suitable equipment. Typewriting, stenography, music, military training, and physical education are not credited at all toward the required fifteen units, and most miscellaneous subjects, such as drawing and manual training, are not credited for more than one unit each.

DISCIPLINE

ABSENCE: A student who is absent in a course for any cause for a number of hours in a given term, that exceeds twice the number of hours per week in which the course is given, shall be marked conditioned in that subject, and immediately reported to the Office. With the consent of the professor in charge of the subject, he may, however, continue in class, but said condition must be removed by examination before classes are resumed in September. He cannot receive higher than a passing mark. Absence will be counted against the student from the beginning of the course, no matter at what date he may enter.

Absence from an examination unless excused by the President is considered a failure. Lessons omitted on account of absence are counted against the student unless made up outside of class hours.

PERMISSIONS: The granting of permissions is reserved to the President, or in his absence, to the Vice-President. These permissions will be given

only when the request is made in writing by the parent and approved by the professor in charge of the class. Parents are requested not to resort to telephone calls to secure such privileges. No interruption is permitted in class studies except for very urgent reasons. Students are not permitted to answer telephone calls during class hours.

VACCINATION: According to the regulations of the Bureau of Health of the City of Philadelphia, La Salle College is required to refuse admission to any person except upon a certificate signed by a physician stating that such person has been recently vaccinated or has previously had smallpox. All students entering La Salle will therefore have to present such a certificate at the time of entrance and in default of such certificate must be vaccinated.

ATHLETICS: While the school encourages and maintains the principal sports they are always considered secondary. Students whose class work is unsatisfactory are ineligible to compete in any sport. Consent of parents is necessary for any student to take part in games.

PHYSICAL EDUCATION: Aware of the importance of physical training, and the part it plays in the harmonious development of the entire man, the Faculty spares no pains to secure for the student all the benefits to be derived from approved modes of exercise. This course is obligatory on all students unless they can present in writing a doctor's certificate excusing them.

GENERAL INFORMATION

Status and Classification of Students

Regular students in the courses in Arts, Arts and Science, Business Administration, Education and Engineering are graduated upon the satisfactory completion of sixty-seven (67) units of work.

A unit of work represents two hours a week of lectures or recitations or four hours a week of laboratory work for one term.

A student with fewer than twenty (20) units of work to his credit at the beginning of any college year shall be classed during that year as a Freshman.

A student who has to his credit at the beginning of any college year fewer than thirty-eight (38) and not fewer than twenty (20) units of work shall be classed during that year as a Sophomore.

A student who has to his credit at the beginning of any college year fewer than fifty-four (54) units and not fewer than thirty-eight (38) units of work shall be classed during that year as a Junior.

A student with fifty-four (54) or more units of work to his credit at the beginning of any college year shall be classed as a Senior.

Examination and Grades

At the end of each term one week will be set apart for examinations in all subjects.

In reporting the standing of each student in the College, the following grades only are recognized: D, distinguished, 90-100; E, excellent, 85-90; G, good, 80-85; P, passed, 70-80; N, condition, 55-70; F, failure. A student receiving the grade of "N" is entitled to one re-examination. A student receiv-

ing the grade of "F" must repeat that subject in class the next time it is offered.

A student will not be permitted to change his course after the first two weeks of the college year. A student discontinuing a course without permission will receive the grade of "F" for that course.

Degrees

The degree of Bachelor of Philosophy (Ph. B.) is conferred upon the successful completion of the course in Arts.

The degree of Bachelor of Arts (A. B.) is conferred upon the successful completion of the course in Arts and Science.

The degree of Bachelor of Science (B. S.) will be conferred upon students who have successfully completed the three-year Pre-Medical course at the termination of their first year in an approved medical school upon the recommendation of the Dean of the said school. Such students must register as Extra-Mural Seniors.

The degree of Bachelor of Science in Business Administration (B. S. in Bus. Adm.) will be conferred upon the successful completion of the course in Business Administration.

The degree of Bachelor of Science in Education (B. S. in Educ.) will be conferred upon the successful completion of the course in Education.

The degree of Bachelor of Science in Engineering (B. S. in Eng.) will be conferred upon the successful completion of the course in Engineering.

The degrees of Master of Arts (A. M.) and Master of Science (M. Sc.) will be conferred upon the satisfactory completion of fourteen (14) units of grad-

uate work and the acceptance of a thesis setting forth the results of original investigation.

Every candidate for a degree is required to present a typewritten thesis on a subject connected with the major grouping in his course. The subject selected and manner of treatment must be approved by the professor of the department to which it belongs, on or before February 1 of the year in which he presents himself for the degree. Such help and guidance may be offered the candidate as the professor may judge right, and the completed thesis shall be handed in for final adjudication on or before April 15th. General rules in the evaluation of the treatment of the thesis shall obtain. Qualitatively, it should evidence an inclination to solve problems, an ability to grasp the fundamental and altering conditions, and interest in intelligent research work: quantitatively, it should display power to do work in which sustained effort is characteristic.

Thesis in the various departments must be typewritten on paper supplied at the College Book Store, 11x8½ inches, with margin of an inch and one-half. The same shall be suitably bound. Science theses must be accompanied by the necessary drawings and illustrations. All approved theses become the property of the College and are placed in charge of the Librarian.

If a student fail to present his thesis, or, if the thesis be rejected the candidate shall not be recommended for his degree.

At the discretion of the Faculty, a certificate of proficiency may be given to a student who has followed, under the direction of the Faculty, a special course of one or more subjects, and gives evidence of proficiency therein.

HONORS: Students who attain an average of ninety per cent. in all the subjects of their college course, will be graduated with Honor. They will be graduated with Credit, if they attain an average of from eighty-five to ninety per cent. in all the subjects of their college course. A failure or a condition in any prescribed course automatically eliminates a student from candidacy for honors.

When special honors are dependent upon general average for courses extending over the four-year course, the candidate shall nominate at an early date that he is a prospective candidate.

Tuition Fees

The tuition fee is payable in two equal installments. The first payment must be made upon date of registration and the second payment, which becomes due February 1, must be made within one week of that date. A student entering after February 1 pays all charges upon registration.

Failure to Pay

If a student fails to pay his fees and other charges in accordance with the above regulations, his name is dropped and he is excluded from lectures, recitations, and examinations until payment is made. The student will be held accountable for all absences incurred through the operation of this rule. If payment in full is not made within three weeks of the date upon which charges are due, the student may be permanently dropped.

Return of Fees on Account of Illness, Etc.

A student who withdraws on account of illness or other physical disability, shall be given a return of an

amount which shall be such proportionate part of the term fees as the number of weeks in which he is not in attendance bears to the number of weeks in the academic session, provided such proportionate part be not more than one-half of the term's fees. Formal notice of withdrawal, together with the doctor's certificate, must be filed with the Registrar.

Late Registration and Absence

Neither late registration nor absence during the term shall entitle the student to a reduction in fees.

No student shall be granted a certificate of credits or be graduated who has not paid in full all his financial obligations.

Payments

Payment must be made in cash, or by check, drawn to the order of La Salle College for the exact amount due. All fees are payable in advance at the office of the Treasurer.

Fees and Charges

(Note—A matriculation fee of five dollars is added to the first term charge of new students.)

Tuition per term for Pre-Medical and Pre-

Dental Courses	\$150.00
Tuition per term—all other courses	125.00
Commencement Fees—for degrees	30.00
Commencement Fees—for certificates	20.00
Conditional Examination per subject	2.00
Copy of Certified Credits	2.00

Books and stationery at current prices purchasable at College Book Store.

COURSE IN ARTS

FRESHMAN YEAR	HOURS PER WEEK		Units
	First Semester	Second Semester	
English 1	3	..	1½
English 3	1	1	1
English 4 .....	..	3	1½
Mathematics 1	3	..	1½
Mathematics 2 .....	..	3	1½
Latin 11	3	..	1½
Latin 12 .....	..	3	1½
Greek 11	2	..	1
Greek 12	1	1	1
Greek 13 .....	..	2	1
French 2	3	..	1½
or			
German 1	3	..	1½
French 3 .....	..	3	1½
or			
German 2 .....	..	3	1½
Sociology 11	3	..	1½
Sociology 12 .....	..	3	1½
Philosophy 1	3	..	1½
Philosophy 2 .....	..	3	1½
Religion 1	1	1	1
Religion 6	1	1	1
History 11	2	..	1
History 12 .....	..	2	1

COURSE IN ARTS

SOPHOMORE YEAR	HOURS PER WEEK		Units
	First Semester	Second Semester	
English 2	3	..	1½
English 10 .....	..	3	1½
English 13	1	1	1
Mathematics 3	3	3	3
Latin 13	2	..	1
Latin 14	1	1	1
Latin 15 .....	..	2	1
Greek 14	3	..	1½
Greek 15 .....	..	3	1½
French 4	3	..	1½
or			
German 3	3	..	1½
French 5 .....	..	3	1½
or			
German 4 .....	..	3	1½
Economics 11	3	3	3
Philosophy 3	3	..	1½
Philosophy 4 .....	..	3	1½
History 13	3	3	3
Religion 2	1	1	1
Religion 7	1	1	1

COURSE IN ARTS

JUNIOR YEAR	HOURS PER WEEK		Units
	First Semester	Second Semester	
English 12 .....	..	3	1½
English 14	3	..	1½
English 15	1	1	1
Latin 16	3	..	1½
Latin 17 .....	..	3	1½
Greek 16	2	2	2
Greek 17	1	1	2
French 6	3	..	1½
or			
German 5	3	..	1½
French 10 .....	..	3	1½
or			
German 6 .....	..	3	1½
Economics 12	3	..	1½
Economics 13 .....	..	3	1½
Philosophy 5	2	..	1
Philosophy 6 .....	..	2	1
Philosophy 7	2	2	2
History 14	3	..	1½
History 15 .....	..	3	1½
Religion 3	1	1	1
Religion 8	1	1	1
	—	—	—
	25	25	25

COURSE IN ARTS

SENIOR YEAR	HOURS PER WEEK		Units
	First Semester	Second Semester	
English 5	3	..	1½
English 9 .....	..	3	1½
English 16	1	1	1
Latin 19	3	..	1½
Latin 21 .....	..	3	1½
Greek 21	2	2	2
French 8	2	..	1
and			
French 9 .....	..	2	1
German 7	2	2	2
Philosophy 13	3	..	1½
Philosophy 14 .....	..	3	1½
History 16	3	..	1½
History 17 .....	..	3	1½
Religion 4	2	..	1
Religion 5 .....	..	2	1
Thesis .....	..	..	..

COURSE IN ARTS AND SCIENCES

FRESHMAN YEAR	HOURS PER WEEK		Units
	First Semester	Second Semester	
English 1	3	..	1½
English 3	1	1	1
English 4 .....	..	3	1½
Mathematics 1	3	..	1½
Mathematics 2 .....	..	3	1½
Latin 11	3	..	1½
Latin 12 .....	..	3	1½
French 2	3	..	1½
or			
German 1	3	..	1½
French 3 .....	..	3	1½
or			
German 2 .....	..	3	1½
Chemistry 1	8	..	3
Chemistry 2 .....	..	6	2
Biology 1	5	5	3
History 11	2	..	1
History 12 .....	..	2	1
Religion 1	1	1	1
Religion 6	1	1	1

COURSE IN ARTS AND SCIENCES

SOPHOMORE YEAR	HOURS PER WEEK		Units
	First Semester	Second Semester	
English 2	3	..	1½
English 10 .....	..	3	1½
English 13	1	1	1
Mathematics 3	3	3	3
Latin 13	2	..	1
Latin 14	1	1	1
Latin 15 .....	..	2	1
French 4	3	..	1½
or			
German 3	3	..	1½
French 5 .....	..	3	1½
or			
German 4 .....	..	3	1½
Physics 1	6	6	4
Philosophy 1	3	..	1½
Philosophy 2 .....	..	3	1½
Biology 12	2	..	1
Biology 19	2	2	2
Religion 2	1	1	1
Religion 7	1	1	1

COURSE IN ARTS AND SCIENCES

JUNIOR YEAR	HOURS PER WEEK		Units
	First Semester	Second Semester	
English 15	1	1	1
Philosophy 3	3	..	1½
Philosophy 4 .....	..	3	1½
Mathematics 4	3	3	3
Sociology 11	3	..	1½
Sociology 12 .....	..	3	1½
French 6	3	..	1½
or			
German 5	3	..	1½
French 10 .....	..	3	1½
or			
German 6 .....	..	3	1½
History 13	3	3	3
Physics 2	6	..	2
Physics 3 .....	..	6	2
Religion 3	1	1	1
Religion 8	1	1	1

COURSE IN ARTS AND SCIENCES

SENIOR YEAR	HOURS PER WEEK		Units
	First Semester	Second Semester	
English 16	1	1	1
Astronomy 1	2	..	1
Astronomy 2 .....	..	2	1
Geology 1	2	..	1
Geology 3 .....	..	2	1
Physics 6	4	..	1
Mathematics 5	3	3	3
Economics 12	3	..	1½
Economics 13 .....	..	3	1½
Religion 4	2	..	1
Religion 5 .....	..	2	1
Thesis .....	..	..	..

COURSE IN ARTS AND SCIENCES—PRE-MEDICAL

FRESHMAN YEAR	HOURS PER WEEK		Units
	First Semester	Second Semester	
English 1	3	..	1½
English 3	1	1	1
English 4 .....	..	3	1½
Mathematics 1	3	..	1½
Mathematics 2 .....	..	3	1½
Latin 11	3	..	1½
Latin 12 .....	..	3	1½
French 2	3	..	1½
or			
German 1	3	..	1½
French 3 .....	..	3	1½
or			
German 2 .....	..	3	1½
Chemistry 1	8	..	3
Chemistry 2 .....	..	6	2
Biology 1	5	5	3
Biology 2	3½	3½	2
History 11	2	..	1
History 12 .....	..	2	1
Religion 1	1	1	1
Religion 6	1	1	1

COURSE IN ARTS AND SCIENCES—PRE-MEDICAL

SOPHOMORE YEAR	HOURS PER WEEK		Units
	First Semester	Second Semester	
English 2	3	..	1½
English 10 .....	..	3	1½
English 13	1	1	1
French 4	3	..	1½
or			
German 3	3	..	1½
French 5 .....	..	3	1½
or			
German 4 .....	..	3	1½
Chemistry 3	6	6	4
Biology 3	3	3	2
Biology 4	3	..	1
Biology 9	3	..	1
Biology 5 .....	..	3	1
Biology 22 .....	..	1	½
Physics 1	6	6	4
Physics 7	1	1	1
Religion 2	1	1	1
Religion 7	1	1	1

COURSE IN ARTS AND SCIENCES—PRE-MEDICAL

JUNIOR YEAR	HOURS PER WEEK		Units
	First Semester	Second Semester	
English 12 .....	..	3	1½
English 14	3	..	1½
English 15	1	1	1
Sociology 11	3	..	1½
Sociology 12 .....	..	3	1½
French 6	3	..	1½
or			
German 5	3	..	1½
French 10 .....	..	3	1½
or			
German 6 .....	..	3	1½
Biology 7	3	3	2
Biology 8	3	3	2
Biology 11	3	..	1
Biology 6 .....	..	3	1
Chemistry 5	6	..	2
Chemistry 6 .....	..	6	2
Religion 3	1	1	1
Religion 8	1	1	1

SENIOR YEAR

(See article on degrees—General Information)

COURSE IN ARTS AND SCIENCES—PRE-DENTAL

Same as Freshman and Sophomore Years in the Pre-Medical Course, save that Biology 7 replaces Biology 22.

COURSE IN EDUCATION

FRESHMAN YEAR	HOURS PER WEEK		Units
	First Semester	Second Semester	
English 1	3	..	1½
English 3	1	1	1
English 4 .....	..	3	1½
Philosophy 1	3	..	1½
Philosophy 2 .....	..	3	1½
Education 1	2	..	1
Education 4 .....	..	2	1
Religion 1	1	1	1
Religion 6	1	1	1
Electives .....	..	..	10

COURSE IN EDUCATION

SOPHOMORE YEAR	HOURS PER WEEK		Units
	First Semester	Second Semester	
English 2	3	..	1½
English 10 .....	..	3	1½
English 13	1	1	1
Philosophy 7	1	1	1
Philosophy 8	2	2	1
Philosophy 11	2	2	2
Education 6	2	..	1
Education 7	3	..	1½
Education 8 .....	..	3	1½
Electives .....	..	..	10

COURSE IN EDUCATION

JUNIOR YEAR	HOURS PER WEEK		Units
	First Semester	Second Semester	
English 12 .....	..	3	1½
English 14	3	..	1½
English 15	1	1	1
Education 2	3	..	1½
Education 3 .....	..	3	1½
Philosophy 9	1	1	1
Philosophy 12	2	2	2
Electives .....	..	..	10

COURSE IN EDUCATION

SENIOR YEAR	HOURS PER WEEK		Units
	First Semester	Second Semester	
English 16	1	1	1
Education 9	2	..	1
Education 11	2	..	1
Education 12 .....	..	4	1
Education 13 .....	..	2	1
Philosophy 13	3	..	1½
Philosophy 14 .....	..	3	1½
Thesis .....	..	..	..
Electives .....	..	..	6

DEPARTMENTS

Astronomy

ASTRONOMY 1. DESCRIPTIVE ASTRONOMY: The dimensions of the earth, its mass and motions. Phenomena depending on the axial and orbital motions of the earth. Determination of the figure and magnitude of the earth. Kepler's Laws and applications. Phenomena depending upon change of place. Fundamental principles of celestial mechanics. Dimensions and configuration of the solar system. The sun and planets. Tides, Eclipses, Transits. (Two hours, first term.)

ASTRONOMY 2. PRACTICAL ASTRONOMY: Construction, adjustment, and use of the sextant, transit, spectroscope and equatorial telescope. Determination of the meridian, latitude, and local time. (Two hours, second term.)

Biological Sciences

The department of biology is well supplied with all equipment necessary for the thorough prosecution of the courses of study it offers. An elaborate series of ~~imported~~ diagrams, supplemented by charts especially executed for the department by a local artist, are used for illustrative purposes in the introductory classes in Botany and Zoölogy. The microscopes available for student use are all of the standard type now used in large universities, some being provided with oil immersion lenses.

sliding For the course in micro-technique, rotary and ~~sledge~~ microtomes of the latest designs are used. The department equipment includes magnificent sets

of histological mounts recently acquired. A specially painted skeleton and individual sets of bones are used in the osteological course.

The courses offered are especially adapted for the needs of students preparing for medicine or dentistry as well as for those in the course in education preparing for teaching.

BIOLOGY 1. GENERAL BOTANY: An introductory course including, in the first term, a study of the form, structure and life processes of flowering plants. The second term embraces life-history studies in the lower types of plant life. Bacteria, algae, fungi, liverworts, mosses, ferns, fern allies, cycads, conifers and the leading groups of angiosperms are studied in evolutionary sequence. Laboratory work is supplemented by plant analysis. (Two hours lecture and three hours laboratory, both terms. Three units.)

BIOLOGY 2. GENERAL ZOÖLOGY: A general course dealing with the characteristics of living matter, cell structure, the comparative anatomy of leading phyla of animals, problems of heredity, etc., together with a review of significant animal types from protozoa to the higher mammalia. (One hour lecture and two hours laboratory, both terms. Two units.)

BIOLOGY 3. MAMMALIAN ANATOMY: A course primarily intended for training in dissection, independence in scientific thought and effort as a preparation to the study of human anatomy. The cat is used as material. Prerequisite, Biology 2. (One hour lecture and two hours laboratory, both terms. Two units.)

BIOLOGY 4. HUMAN OSTEOLOGY AND MYOLOGY:

A course designed to familiarize students, about to enter medicine or dentistry, with the close mechanical inter-relation between bones and muscles, and with the complicated anatomical terminology. Prerequisite, Biology 2 and 3. (One hour lecture and two hours laboratory, one term. One unit.)

BIOLOGY 5. HISTOLOGY: This course is designed to acquaint the student with the characteristics of various groups of tissues, with special reference to the human body. Prerequisite, Biology 2 and 3. (One hour lecture and two hours laboratory, one term. One unit.)

BIOLOGY 6. EMBRYOLOGY: The fundamental processes underlying the development of vertebrates. Morphological changes which occur in the frog and chick embryos will form the basis of instruction. Prerequisite, Biology 2 and 3. (One hour lecture and two hours laboratory, one term. One unit.)

BIOLOGY 7. BACTERIOLOGY: The general morphology and physiology of the true bacteria with special reference to pathogenic forms. Laboratory work in the methods of preparing culture media, the cultivation, isolation and staining of the more common bacteria. Prerequisite, Biology 1 and Chemistry 1. (One hour lecture and two hours laboratory, both terms. Two units.)

***BIOLOGY 8. CELL PHYSIOLOGY:** The laws of energetics and thermodynamics and their application to lyophilic and lyophobic colloids. The application of these fundamentals to the living cell. The emphasis is placed on adsorption, anabolism and katabolism. Prerequisite, Biology 1 or 2, Chemistry 1

permeability
experiments are designed to illus-
trate life phenomena & cell

and Physics 1. Physical Chemistry should precede or accompany this course. (One hour lecture and two hours laboratory, both terms. Two units.)

BIOLOGY 9. PARASITOLOGY (Medical Entomology and Protozoölogy): Animals as causal factors in human diseases. The relationship of the protozoa, round worms, flat worms and arthropods to human physiology. Prerequisite, Biology 2 ~~and 3~~. (One hour lecture and two hours laboratory, one term. One unit.)

BIOLOGY 10. MATERIA MEDICA: ~~A short course reviewing~~ The origin, isolation, recognition and utilization of the principal materials used in medicine that are derived from plant or animal sources. Prerequisite Biology 1. (~~Two hours lecture and demonstration, one term.~~) (One unit.)

BIOLOGY 11. BIOLOGICAL MICRO-TECHNIQUE: The methods of preparing plant and animal tissue for microscopic study. Ordinary and special modes of fixing, embedding, cutting, staining and mounting. Free-hand, celloidin and paraffin technique. Prerequisite, Biology 1 or 2. (One hour lecture and two hours laboratory, one term. One unit.)

*BIOLOGY 12. ORGANIC EVOLUTION AND GENETICS: A lecture course outlining briefly the history of the development of evolutionary science and presenting the evidences of organic evolution together with the leading theories advanced, such as those of Lamarek, Darwin, DeVries and Nageli. The scope and method of genetics or modern experimental evolution. Mendel's laws of heredity as applied to plants and animals. Biometry. The application of evolutionary

principles to human affairs. Prerequisite, Biology 1 or 2. (Two hours lecture, one term. One unit.)

*BIOLOGY 13. CYTOLOGY: An advanced course concerned with studies in plant and animal cell structure. The role of the cell in heredity. The cytological basis of Mendelism and Weismannism. ~~Sex and sex-determination.~~ Prerequisite, Biology 1, 2 and 11. It is advised that Biology 8 and 12 accompany or precede this course. (One hour lecture and two hours laboratory, both terms. Two units.)

7 *BIOLOGY 14. ^{General Biology} ~~OECOLOGY~~: A study of plants and animals in relation to their environment and to each other. The structural and physiological adaptations of organisms to environmental factors. Plant and animal communities and associations. Prerequisite, Biology 1, 2 and 8. (One hour lecture and two hours laboratory, both terms. Two units.)

BIOLOGY 15. FIELD BOTANY: A field survey of the phanerogamic and cryptogamic flora of Philadelphia and vicinity supplemented by lectures on the method of preserving and classifying plants. Prerequisite, Biology 1. (Hours and units to be arranged by the professor in charge, both terms.)

BIOLOGY 16. FIELD ZOÖLOGY: A corresponding course to Biology 15 concerned with the fauna of Philadelphia and environs. Ornithology, entomology, ichthyology and mammalogy in their field, economic and systematic aspects. Prerequisite, Biology 2. (Hours and units to be arranged by the professor in charge, both terms.)

*BIOLOGY 17. TAXONOMY OF THE SPERMATOPHYTES: An advanced course in the classification of

Biology 17 General Biology (for students in the Course in Business Administration only): A brief study of life processes occurring in plants and animals and man. (Two hours lecture and demonstration - 1 hour 'H')

the higher plants. The distinguishing features of the leading families of seed plants in order of evolutionary development. Prerequisite, Biology 1. Biology 15 should precede or accompany this course. (One hour lecture and two hours laboratory supplemented by field excursions and visits to conservatories, both terms. Two units.)

BIOLOGY 18. ECONOMIC BIOLOGY: The relation of plants and animals to human welfare and man as a factor in the environment of plants and animals. Prerequisite, Biology ~~1 and 2~~ (Two hours lecture, one term. One unit.)

BIOLOGY 19. ANTHOPOLOGY: A lecture course dealing with the "science of man and his works." The past history of the race as seen in the remains of Pithecanthropus, the Heidelberg man, the Neanderthal man, the Rhodesian man, the Cro-magnon, Brunn and Grimaldi races. The origin and classification of the living races. Language, the spread of the alphabet, the beginnings of civilization and its subsequent growth and development. Prerequisite, Sophomore standing. Should be preceded or accompanied by Biology 12. (Two hours, both terms. Two units.)

BIOLOGY 20. THE ELEMENTS OF HORTICULTURE: A non-technical course dealing with the principal methods of raising ornamental flowering plants and ferns. Plant propagation and care. Herbaceous and woody plant materials used in indoor and garden planting. Prerequisite, Biology 1. Should be preceded or accompanied by Biology 17. (One hour lecture and two hours laboratory supplemented by

trips to nurseries and private estates, both terms. Two units.)

*BIOLOGY 21. HISTORY OF BIOLOGICAL SCIENCE: The philosophical beginnings of biology among the early Greeks and its subsequent development. The principal epochs in its history. The influence of the cell theory and the evolutionary theory on modern thought. The rise of the "research method" and the present day fields of active biological investigation. Prerequisite, Biology 1, 2 and 12. (~~One hour lecture, both terms.~~ ²⁰ One unit.) *hours to be arranged by the professor - 2 hrs. ea. term*

²⁰ BIOLOGY 22. INTRODUCTORY PHYSIOLOGY: A discussion of methods and apparatus requisite to the study of organic physiology. (One hour lecture, one term. One-half unit. This course is in preparation for Biology 8.)

(*) This course may be offered for graduate credit with permission of the professor in charge and the president of the College.

Chemistry

The courses in chemistry are organized with the general aim of exciting in the student a spirit of inquiry and of training him to the habit of persistent work, and of dealing intelligently and correctly with nature and its laws. In chemistry, as in all other experimental sciences, progress consists in the discovery and classification of facts. Hence the student must be made acquainted with the methods of observation and experimental facts, and the laws of chemistry. From the very beginning of his course the greatest stress will be laid upon laboratory work; but lectures will be regularly given in general, organic, qualitative analysis, quantitative analysis,

physical and physiological chemistry, and from time to time, on selected topics.

Though the courses are primarily intended for those looking forward to a career as dentists, physicians, or teachers, the instruction and training imparted in them are of equal importance and utility to the analyst, the practical and the technical chemist.

The courses of instruction offered in this department commence with the rudiments of the science in order that the student may be properly prepared, both in knowledge and methods of study, for profitable work in the more advanced courses.

CHEMISTRY 1. GENERAL INORGANIC CHEMISTRY: It is assumed that the students entering this course have already had instruction (including laboratory work) in elementary physics; it is advisable that they have also some knowledge of elementary chemistry. The non-metallic elements and their compounds are studied and along with them are presented the theories and laws which they serve to illustrate. The metallic elements and their compounds are considered along with appropriate theoretical discussions. Throughout the course the applications of chemistry to everyday life and to the arts and industries are emphasized. These phases of the subject have special interest and cultural value for the student. (Four hours lecture and four hours laboratory, first term.)

CHEMISTRY 2. QUALITATIVE ANALYSIS: This course treats of the theory of solutions and in the laboratory the detection of metal ions. The success with which a student has pursued his laboratory work will be judged largely by the skill which he displays

in the analysis of unknown substances and mixtures, such as minerals. This analysis will include the detection of common acid constituents as well as of the metallic ions. (Two hours lecture and four hours laboratory, second term.)

CHEMISTRY 3. ORGANIC CHEMISTRY: In this course the student is introduced to the study of compounds of carbon. The points of similarity and difference between inorganic chemistry, the prerequisite course, and organic chemistry are brought out. In this way the student is enabled to coordinate this branch of Chemistry with something already familiar to him. This course includes fundamental definitions; saturated hydrocarbons; alcohols, acids, aldehydes, ketones, amines, unsaturated compounds; polyatomic alcohols; hydroxy acids, optical isomerism; carbohydrates; cyanogen and carbonic acid; amino acids and proteins. Benzene and its homologues; aromatic nitrogen compounds; oxygen compounds; dyes, naphthalene and anthracene; the coal-tar industry; heterocyclic and alicyclic compounds; the structure theory. (Two hours lecture and four hours laboratory, both terms.)

CHEMISTRY 4. QUANTITATIVE ANALYSIS: The first half of this course is devoted to fundamental operations in volumetric analysis and the standardization of common acids, alkalies, and oxidizing solutions in determining free alkali, acid or reducing agent. During the second half year elementary gravimetric exercises including the complete analysis of a sample of some common mineral are given. Throughout the year the theoretical principles underlying all analytical work are discussed and the

solution of numerous problems in stoichiometry is required. Prerequisite, General Chemistry. (Two hours lecture and four hours laboratory, both terms.)

CHEMISTRY 5. PHYSIOLOGICAL CHEMISTRY: This course is intended primarily for the students of medicine. It includes the study of fats, phosphatids, proteins, digestion, absorption, metabolism, and urine. (Two hours lecture and four hours laboratory, first term.)

CHEMISTRY 6. PHYSICAL CHEMISTRY: This is a course on the elementary principles of modern physical chemistry. The matter includes the gas laws, theories of solution, surface tension, viscosity, diffusion and osmotic pressure, electrolytic dissociation, the law of mass action, hydrogen ion concentration, colloids, and adsorption. (Two hours lecture and four hours laboratory, second term.)

Graduate Courses

CHEMISTRY 7. ADVANCED INORGANIC CHEMISTRY: Recent developments and current literature will be discussed in lectures and conferences. Frequent reports by members of the class will be expected. The laboratory work throughout the year will consist of special inorganic preparations. (Two hours lecture and six hours laboratory, both terms.)

CHEMISTRY 8. ADVANCED ORGANIC CHEMISTRY: Lectures, conferences, and laboratory work covering special topics and special preparations in organic chemistry. Prerequisites, Chemistry 3 and Mathematics 4. (Two hours lecture and six hours laboratory, both terms.)

CHEMISTRY 9. ADVANCED PHYSICAL CHEMISTRY: For graduate students specializing in chemistry. A course of lectures on the principles of theoretical chemistry, from the point of view of the kinetic theory and the laws of thermodynamics, supplemented by laboratory work and problems. Prerequisites, Chemistry 6 and Mathematics 4.

CHEMISTRY 10. CHEMICAL HISTORY AND LITERATURE: Recent advances in chemistry. The purpose of this course is to make systematic provision for the acquirement by the student of a knowledge of the present status of the science. A series of essays (one every four weeks; about six essays during the year) each of approximately three thousand words is required. No laboratory work is involved but the student is expected to make diligent and thorough search of all available sources of information, not only in the library of this department, but also in the libraries of the city.

A typical essay will be as follows: "Inorganic Chemistry, Recent Advances in, covering: researches just completed or still under way; new books of special interest to inorganic students; present status of inorganic chemistry and its probable development during the next decade." A similar title may be applied to analytical chemistry or to other branches of the subject, or to sub-divisions of the major branches of chemistry.

Education

EDUCATION 1. PRINCIPLES OF EDUCATION: The educative process. The physical, mental, and moral laws upon which education is based. Aims and ideals

of Catholic education. The teacher and his qualifications. School organization, hygiene and discipline. Aids to teaching. (Two hours, first term.)

Thorndyke, *The Principles of Teaching*; Ruediger, *Principles of Education*; Bagley and Colvin, *Human Behavior*; Horne, *Philosophical Principles of Education*.

EDUCATION 2. PHILOSOPHY OF EDUCATION: Its relation to the other branches of education; false aims of education; culture epoch theory and its meaning; nature and basis of the educative process; physical growth and mental development; agencies of education; the school and its relation to the home, church and state; organization and development of present educational systems compared. (Three hours, first term.)

EDUCATION 3. PSYCHOLOGY OF EDUCATION: A study of mental development. The psychological basis of education and of methods of teaching. Refutation of prevalent errors in educational psychology. (Three hours, second term.)

Shields, *Psychology of Education*; Horne, *Psychological Principles of Education*.

EDUCATION 4. PRIMARY METHODS: Aims and principles of primary education; selection and development of subject matter; consideration and study of methods of teaching various subjects. (Two hours, second term.)

EDUCATION 5. SPECIAL METHODS: This course is open only to Juniors and Senior students. (Subjects and hours to be arranged by the professor in charge.)

EDUCATION 6. METHODS IN TEACHING: Meaning of instruction and its relation to education. The psychologic and logical views of knowledge. The psychologic basis of method. The function of the recitation. The conduct of the recitation. (Two hours, first term.)

Christian Brothers, *Elements of Practical Pedagogy*; Strayer, *Brief Course in the Teaching Process*; Freeman, *Psychology of the Common Branches*; Collar and Crook, *School Management and Methods of Instruction*.

EDUCATION 7. HISTORY OF EDUCATION (Ancient and Medieval): Chinese, Hindoos, Egyptians, Persians, Israelites, Greeks and Romans. Education during the Middle Ages: Monasticism, Scholasticism. The Crusades. Rise of universities. Noted educators. McCormick. (Four hours, first term.)

EDUCATION 8. HISTORY OF EDUCATION (Modern): The Renaissance; Humanism; the Reformation; Catholic education; history of education in the United States. McCormick. (Four hours, second term.)

EDUCATION 9. PERSONAL HYGIENE AND SANITATION: A study of the chief factors of health and normal activity; causes, detection, and prevention of children's ills; school sanitation,—heating, lighting, ventilation. (Two hour, first term.)

EDUCATION 10. SCHOOL ADMINISTRATION AND MANAGEMENT: General views of the aim, organization and procedure in the administration and management of the elementary school system. Governing elements in Private and State Schools. Function of State Boards; duties of governing officials and their relations to others in the system. Standardization,

its aims and means; the certification of teachers. (Three hours, one term.)

EDUCATION 11. OBSERVATION: Arrangements are made from time to time for the observation of lessons conducted by teachers, ripe in experience, and prominent from the viewpoints of ability and attainments. The students note the proceedings, report their observations, and are helpfully advised upon the generic or specific subjects they elect to profess. (Four hours, first term.)

EDUCATION 12. PRACTICE TEACHING: Model lessons are given from time to time. The opportunities afforded are due to the association of the professors of La Salle College directly with the Brothers of the Christian Schools, who conduct a series of elementary and secondary schools in the city. By opportune arrangement with the schools thus conducted, a correlated lesson may and is conducted by the pedagogical aspirant in presence of his class associates and the professor in charge of the course. Criticisms are made by the class. Discussion follows; theoretical and practical suggestions are offered by the professor. (Four hours, second term.)

EDUCATION 13. EDUCATIONAL MEASUREMENTS: This course is intended to show the general nature and purpose of mental tests; to demonstrate typical tests; and to point out the place of mental tests in school administration. It offers practice in the statistical treatment of data, including calculations and graphic representations. (Two hours, both terms.)

EDUCATION 14. SPECIAL OBSERVATIONAL COURSES: Opportunities are offered for advanced students to observe special presentations in mathematics, history, the language arts, and the natural sciences. It includes the study of up-to-date laboratory methods. Lectures, readings, and consultations. (Hours arranged by professor.)

Economics and Sociology

The courses offered in the department of economics are designated to give the student a knowledge of the nature of economics phenomena, of the principles and scope of economic science, and of the methods suited to the investigation and study of its problems.

The courses offered in the department of sociology are intended to further intellectual formation of the student, and to prepare him to meet the actual problems encountered in everyday life. An endeavor is made to bring the student's work into close relation with social and political conditions about him and to enable him to arrive at correct interpretations of characteristic problems and movements in society.

ECONOMICS 11. PRINCIPLES OF ECONOMICS: Principal and practical economic problems. Prerequisites, Sophomore standing. (Three hours, both terms.)

ECONOMICS 12. ECONOMIC PROBLEMS: Public policies relating to money, banking, international trade, taxation, labor problems, tariff, railroads, and trust problems, government, ownership; socialism

and social reform. Prerequisites, Economics 11. (Three hours, one term.)

ECONOMICS 13. LABOR PROBLEMS: Rise of factory system, labor legislation, growth of trade, unions and changes in law in respect to them, policies of trade unions, strikes, lock-outs, arbitration and conciliation, proposed solution of labor problems, and future of labor in the United States. Prerequisites, Economics 11 and 12. (Three hours, one term.)

ECONOMICS 14. CORPORATION AND TRADE PROBLEMS: Trust problems as presented in the United States. Rise and progress of industrial combinations, forms of organizations and policies of typical combinations, common law and trusts, anti-trust acts and their results and other proposed solutions of problems. Prerequisites, Senior standing or two years in Economics. (Three hours, one term.)

SOCIOLOGY 11. PRINCIPLES OF SOCIOLOGY: Taking up such subjects as, evolution of society, analysis of its nature and life, causes that affect its social control and social justice, and other problems. Prerequisites, Junior standing. (Three hours, one term.)

SOCIOLOGY 12. CRIMINOLOGY AND PENOLOGY: A study of crimes and social problems, penal institutions, capital punishment, prison labor, prison administration and management, jails, work houses, reformatories and problems of treatment and prevention. Prerequisites, Juniors, or Seniors. (Three hours, one term.)

SOCIOLOGY 13. PRACTICAL APPLICATION OF SOCIOLOGY: The study of the population of the

United States in regard to increase, distribution, nativity, sex, age, marital conditions, mortality, etc.

Special study of immigration, marriage, divorce, religion, education, public health, poverty and industrial institutions. Prerequisites, Juniors or Seniors. (Three hours, one term.)

Civil Engineering

The course of study leading to the degree of Bachelor of Science in Civil Engineering has been outlined to afford a thorough, analytical and practical training in construction and management. The theoretical part of the course is covered mainly in the Department of Chemistry, Physics, and Mathematics, and the results there obtained are applied to problems of engineering.

The course covers in a very comprehensive manner: Surveying, plane and geodetic; highway and railroad engineering; hydraulic and sanitary engineering; including sewer systems; sewage treatment and disposal; water supplies for towns and cities; foundations, masonry and reinforced concrete design; graphical and analytical designs for all types of metallic structures.

ENGINEERING 1. SURVEYING, FIELD AND OFFICE WORK: Surveys and office work go into detail as follows: Survey 1: Pacing, chaining and ranging out lines. Survey 2: With compass and chain, keeping of notes, computation of area, making scale map. Survey 3: Adjustment of the level, use in running lines of differential, profile and reciprocal levels, keeping of notes, preparation of scale profiles. Survey 4: Adjustment of transit angle reading by repetition,

survey for closed field, measuring distances with steel tape and angles by the transit. Methods used in measuring and calculating stream flow; mining and sub-surface methods; city surveying. Theory and use of slide rule. Elements of curves and earthwork. Theory of Stadia. Prerequisite, Mathematics 2. (Two terms, 4 hours.)

ENGINEERING 2. GEODETIC SURVEYING: Theory of geodetic surveying and calculating the necessary connections. Least squares and adjustment of observations. (One hour lecture per week.)

ENGINEERING 3. HIGHWAY ENGINEERING: Road resistances; design, construction, and maintenance of dirt gravel, broken stone, and miscellaneous roads; city planning, street location; city pavements; brick, Belgian, granite, asphalt and wood block; foundations of pavements; grades; drainage; specifications. Prerequisite, Civil Engineering 1. (Three hours, one term.)

ENGINEERING 4. RAILROAD SURVEYING: Theory and field practice, simple, compound, reverse, parabolic, vertical and transition curves; turnouts, switches, connecting tracks and crossings; calculating of earthwork by formulas, diagrams and tables; calculation of haul and overhaul using the Mass Diagram.

Reconnaissance, preliminary and location survey of a line from one to two miles in length; cross-sectioning and computations necessary to place the work under contract. This involves the completion of maps and profiles, estimates and specifications. Prerequisites, Mathematics 4, Civil Engineering 7, Physics 7. (Four hours, both terms.)

ENGINEERING 5. SEMINAR: Reading and discussion of topics from current technical papers and magazines; cost keeping, cost analysis and engineering economics. (One hour, one term.)

ENGINEERING 6. THEORY OF STRUCTURES: Applications of the problems in mechanics, studying the loads, shears and moments as applied to simple structures. Prerequisite, Mathematics 3 required, or to be taken simultaneously.

ENGINEERING 7. THEORY OF STRUCTURES: Computation and analysis, by graphical and analytical methods, of stresses in structures of various kinds. The subjects taken up are: Plate girder, both deck and through, various types of roof and bridge trusses, viaducts, two and three hinged arches, swing bridges, suspension bridges, and cantilevers. Prerequisite, Civil Engineering 6. Lectures and topic works. (Four hours, both terms.)

ENGINEERING 8. STRUCTURAL DESIGN: The complete computation, detail drawing and tracing of a plate girder, Pratt truss, riveted or pin connected, a steel roof truss and various types of columns. Prerequisite, Civil Engineering 7. (Four hours, one term.)

ENGINEERING 9. MASONRY CONSTRUCTION, FOUNDATIONS, REINFORCED CONCRETE. Pressure and abutting power of earth; design and constructing of retaining walls; stability of masonry structures in general; stability of towers and chimneys; theory and design of arches, both vertical, and included loads; theory and design of reservoir walls, earth and high masonry dams; earth foundations;

foundations for buildings; safe loads on masonry and foundation beds; pile driving and pile foundations; safe load on piles; sheet piling and coffer-dam methods; pneumatic foundations and caissons; open dredging; methods of working in quicksands; designs of reinforced concrete beams, columns, retaining walls, and reinforced concrete structures in general. Prerequisite, Civil Engineering 6. (Three hours, both terms.)

ENGINEERING 10. HYDRAULICS Hydrostatics; laws of hydraulics; measurement of head, pressure and flow: gauges: manometers; Venturi meter; flow through orifices; weirs, their use, construction and discharge; flow and discharge of pipes; compound pipes and branches, open channels; canals; brief course in water power engineering. Prerequisite, Physics 7, Mathematics 2 and 3. (Three hours, one term.)

ENGINEERING 11. WATER SUPPLY, DESIGN AND CONSTRUCTION OF SEWERS, SEWAGE DISPOSAL: General problems in water supply; waste; metering; rainfall; run-off and flood flows; storage; river and lake intakes; wells and underground flows; gravity systems; pumping; elevated tanks and storage; construction, operation and maintenance of distribution systems; sewage and surface drainage of cities; separate and combined systems; catch basins; man-holes, ventilators; flush tanks; flow and discharge of sewers; treatment of sewage and refuse of manufacturing plants: septic tanks; contract beds; percolating filters: disposal of sludge; plants for sewage treatment. Prerequisite, Civil Engineering 10. (Three hours, both terms.)

ENGINEERING 12. RAILROAD ENGINEERING: General theory of the inception and completion of railroad projects; probable volume of traffic and its growth; maintenance of way; economics of location, with careful study of the effects of alignments, grade, distance, curvature, rise and fall and train resistance. Signalling; rolling stock; brake power; yards and stations; elements of the design of freight yards and terminals; slip switches, crossings and track details. Prerequisite, Civil Engineering 4. (Three hours, one term.)

ENGINEERING 13. TOPOGRAPHIC AND HYDROGRAPHIC SURVEYING: Field practice. Survey for improvement of a country road, in grade and alignment, profiles, cross-sections and computation for excavation; topographic survey with transit and stadia, determination of stadia constant, note keeping and scale maps; hydrographic survey including triangulations. Prerequisite, Civil Engineering 2. (Three hours, one term.)

Graduate Course

ENGINEERING 20. THEORY OF STRUCTURES AND BUILDING DESIGN: Advanced course. Investigation of stresses in framed structures by deflection methods; redundant members; secondary stresses; statically indeterminate structures; one and two hinged arches. Design of steel and reinforced concrete buildings. A thesis on an approved structural engineering subject or a design of a suitable structure is required.

English Language and Literature

This Department aims to further the work of research by training the student in method and by directing his studies in special fields. Both the historical and the technical aspects of the subject are kept in view. For advanced students the center of work is the Seminar, in which from year to year some important period, movement, or author is selected for investigation. Training is also provided by means of lectures and practical exercises for those who desire to become teachers of English, to prepare themselves for journalism, or in other ways to take up literature as a profession. Besides following the lectures and class exercises, the student is advised to profit by the opportunities which are offered him for practice in debating, public reading, and platform speaking.

ENGLISH 1. ENGLISH COMPOSITION: An introductory course in college theme writing. Rhetorical principles and the actual practice of representative contemporary writers will be considered together. There will be weekly themes, class discussions, and individual conferences. (Three hours, one term.)

ENGLISH 2. ADVANCED COMPOSITION: A study of expository and imaginative writing with special reference to the principles and technique of prose style as illustrated in the works of leading English and American writers. Supervised practice in writing; classroom discussions; collateral reading; private conferences. (Three hours, one term.)

ENGLISH 3. INTRODUCTORY PUBLIC SPEAKING: This course seeks to remove self-consciousness; to

discover a method of research that will arouse positive convictions; to teach a method for the effective organization of material; to establish the power to think creatively before people; to free the channels of expression so that the thought may be expressed effectively. (One hour, both terms.)

ENGLISH 3B. ADVANCED PUBLIC SPEAKING: A more technical study of the problem of speech delivery than English 3. Both voice and body are trained to be more responsive to the mind. Proper co-ordination is secured through practical speech problems. Correction of speech defects. Preparation and delivery of speeches of different types before actual audiences when possible. Individual conferences when necessary. Prerequisite, English 3. (One hour, second term.)

ENGLISH 4. AMERICAN LITERATURE TO 1870: A study of the development of our literature through the study of specimens. Extensive study of a few authors. Reviews based upon collateral reading. Not open to Freshmen. (Three hours, one term.)

ENGLISH 4B. AMERICAN LITERATURE SINCE 1870: A study of specimens of our literature from eighteen hundred and seventy to the present day; emphasis upon contemporary poetry; the novel and the drama. Review based upon collateral reading. This course is a continuation of English 4. Not open to Freshmen. (Two hours, second term.)

ENGLISH 5. LITERARY CRITICISM: Criticism and style designed to give a critical philosophical basis to one's judgments of men, affairs, literature and art. (Three hours, first term.)

ENGLISH 6. MAIN TENDENCIES. IN ENGLISH LITERATURE: I. English national ideals from 1400 to 1700. Progress of the Renaissance in English literature and culture; Reformation in England, and a consideration of Milton and Dryden. (Three hours, first term.)

ENGLISH 6B. MAIN TENDENCIES IN ENGLISH LITERATURE: II. English national ideals from 1700 to 1900. A study of the prose and poetry of the eighteenth and nineteenth centuries, and a consideration of Matthew Arnold and William Morris. (Three hours, second term.)

ENGLISH 7. THE DRAMA: This study includes the whole field of the drama. Shakespeare. His work as a whole in the light of Elizabethan dramatic conditions. (Three hours, one term.)

ENGLISH 9. NINETEENTH CENTURY POETRY: After a brief consideration of the romantictists of the later eighteenth century (Blake, Burns, and Cowper), the lectures treat of the dominant aspect of the Romantic Movement in the nineteenth century writers; return to the past in Scott; idealism in Shelley; passion for beauty in Keats; return to nature in Wordsworth. Attention is given to the relations of poetry to the changing national life of the century. (Three hours, second term.)

ENGLISH 10. ENGLISH PROSE OF THE NINETEENTH CENTURY: English thought of the last century as reflected in the prose of Landor, Carlyle, Macauley, Newman, Ruskin, Morris, Arnold Pater and others. (Three hours, one term.)

ENGLISH 11. CONTEMPORARY LITERATURE: Books of the day, of acknowledged value, and of all types will be chosen for review and open discussion. (Three hours, one term.)

ENGLISH 11B. ROBERT BROWNING: A careful study of representative lyrics, dramatic monologues, and dramas with a view to grasping Browning's message and appreciating his art. (Three hours, one term.)

ENGLISH 12. THE DEVELOPMENT OF THE ENGLISH NOVEL: A survey of the beginnings of Fiction. The English novel from Richardson through Meredith and Hardy. Reviews based upon auxiliary readings of representative novels. (Three hours, second term.)

ENGLISH 13. ARGUMENTATIVE ORATORY: Study of the principles and practice of argumentative address. Detailed study of brief-drawing and methods of argumentation. Correlation with the English course in Advanced Argumentation. Principles of persuasion and belief. Delivery of original speeches—six to seven minutes in duration. Theory and practice of debating. (One hour, both terms.)

ENGLISH 14. HISTORY OF ENGLISH LITERATURE: An outline course in the history of English and American Literature, accompanied by a study of masterpieces illustrating the several literary periods. (Three hours, first term.)

Christian Brothers, *English Literature*.

For reading and study: Prologue to the Canterbury Tales, Richard III, Twelfth Night, Pilgrim's Progress, Rape of the Lock, Addison's Essays, Childe Harold (Canto IV), Idylls of the King, Second

Spring, Kenilworth, Fabiola, The Marble Faun, Selections from American Poetry.

ENGLISH 15. HISTORY OF ORATORY: A brief survey of the oratory of Greece and Rome, including an analysis of the classical theories and practices of the art. History of British and American eloquence of the eighteenth and nineteenth centuries is studied. Important speeches of the great orators of the period are presented and analyzed by the class, and the situations which brought them forth are discussed. Aim: to estimate the personalities and influence of outstanding figures, and to determine contributions to the traditions of the art. (One hour, both terms.)

ENGLISH 16. PUBLIC ADDRESS: Delivery of original speeches—ten to fifteen minutes in duration. Conventional method of conducting the course: At each meeting of the class, one member delivers a fifteen-minute address on a previously announced topic. This is followed by several set five-minute discussions by other members of the class. Impromptu discussion follows. The leading speaker summarizes the proceedings of the period, and criticisms are made by the instructor. (One hour, both terms.)

French

FRENCH 1. ELEMENTARY: This course is intended for beginners. Principles of French grammar. Practice in reading, speaking and writing French. (Four hours, both terms.)

Fraser and Squair, *Shorter French Course*; Daudet, *La Belle Nivernaise*; La Bédollière, *La Mère Michel et son chat*; Labiche, *La Grammaire*; Labiche

et Martin, *La poudre au yeux*; Mairet, *Lâ tache du Petit Pierre*; Malot, *Sous famille*.

FRENCH 2. INTERMEDIATE: This course presupposes two years of high school French, or the equivalent of Elementary French. Review of French grammar and practice in reading, speaking and writing French. (Three hours, first term.)

Christian Brothers, *Leçons de langue française*.

FRENCH 3. READING: About, *Le Roi de montagnes*; Bazin, *Les Oberlé*; Chateaubriand, *Extraits*; Dumas, *Monte Cristo*; *Question d'argent*; Mérimée, *Colomba*; Verne, *Michel Strogoff*; *Vingt mille lieues sous les mers*. (Three hours, second term.)

FRENCH 4. ADVANCED: Review of French syntax. Oral and written composition. (Three hours, first term.)

Christian Brothers, *Leçons de langue française*. (Part II).

FRENCH 5. PROSE: Bazin, *Contes choisis*; Puffum, *French Short Stories*; Coppée, *Dix contes choisis*; Daudet, *Lettres de mon moulin*; Fontaine, *Fleurs de France*; *Historiettes modernes*; selections from the short stories of Balzac, de Maupassant, Gautier, Musset. (Three hours, second term.)

FRENCH 6. ADVANCED. COMPOSITION: The French novel. Bazin, *L'Isolée*, Erckmann-Chatrion, *Salammbô*; Hugo, *Quatre-vingt-treize*; Loti, *Pêcheur d'Islande*; Mérimée, *La chronique du règne de Charles IX.*; Sand, *La Mare au Diable*; Vigny, *Cinq-Mars*; *La canne de jonc*. (Three hours, both terms.)

FRENCH 7. FRENCH JOURNALISM: Selections from leading French papers and periodicals: Le

Correspondant, La Croix, Figaro, Journal des Débats, La Nature, Le Pèlerin, Le Petit Parisien, La Revue des Deux-Mondes, L'Univers. (Two hours, first term.)

Assigned readings, reports, discussions.

FRENCH 8. HISTORY OF FRENCH LITERATURE: Assigned readings, reports, discussions and lectures in French. From the origin to the sixteenth century. (Three hours, first term.)

FRENCH 9. HISTORY OF FRENCH LITERATURE: From the seventeenth century to the present. Brunetiere, Manuel de l'histoire de la littérature française; Canat, La littérature française par les textes; Doumic, Histoire de la littérature française; Lanson, Histoire de la littérature française; Larousse, Dictionnaire universel de dix-neuvième siècle. (Three hours, second term.)

FRENCH 10. SCIENTIFIC FRENCH: Technical prose accompanied by grammar and exercises. (Three hours, both terms.)

Geology

GEOLOGY 1. GENERAL GEOLOGY: A general introduction to the study of geology—dynamical and structural. (Two hours, first term.)

GEOLOGY 2. DYNAMICAL GEOLOGY: A study of earthquakes, volcanoes, glaciers, and the geological activity of the atmosphere, streams, and the sea. (Two hours, second term.)

GEOLOGY 3. STRUCTURAL GEOLOGY: A study of the common rocks; their structure, origin, and occurrence in nature.

Lectures, recitations, laboratory and field work. The laboratory and field work consists of the study and identification of rocks, drawing of profiles and structure sections from data gathered during actual field observation; and the interpretation of topographical maps. (Two hours, second term.)

German

GERMAN 1. ELEMENTARY: Grammar, reading, conversation, composition. (Three hours, first term.)

Bagster-Collins, first German Book; Boezinger, Erstes Aufsatzbuch; Storm, Immensee; Hillern, Höher als die Kirche; Zschokke, Der Zerbrochene Krug; Wildenbruch, Der Letzte.

GERMAN 2. INTERMEDIATE: German Syntax. German prose composition. Critical analysis of construction. Systematic drill in word composition, word derivation and the principles of syntax. (Three hours, second term.)

GERMAN 3. LITERARY PROSE: Boezinger, Zeites Aufsatzbuch; Schiller, Wilhelm Tell; Goethe, Hermann und Dorothea; Riehl, Der Fluch der Schönheit, Das Spielsmannsding. (Three hours, first term.)

GERMAN 4. ADVANCED GERMAN: Syntax; practice in speaking and writing; reading. Soll und Haben; Maria Stuart; Minna von Barnhelm, Iphigenie auf Tauris. Prose composition. (Three hours, second term.)

GERMAN 5. ADVANCED GERMAN: Prose composition. Reading. (Three hours, both terms.)

Goethe, *Iphigenie*, *Herman und Dorothea*.
Schiller, selected.
Lessing, selected.

GERMAN 6. SCIENTIFIC GERMAN READING: Introduction to technical literature. (Three hours, both terms.)

GERMAN 7. HISTORY OF GERMAN LITERATURE. (Two hours, both terms.)

History

Instruction in this Department includes courses in General History, Medieval History, Modern History, Philosophy of History, English History and American History. Throughout the College, reading on the subject in hand is not only advised but required as an essential requisite for advancement.

Certain books are prescribed for private reading and subsequent report; difficult works are kept for class reading and discussion.

HISTORY 11. EASTERN AND HELLENIC: The Eastern Nations: Egypt; Phoenicia; Persia; The Hebraic Peoples; Greece with special reference to art, literature, science, philosophy and religion. Open to all undergraduates. (Two hours, one term.)

HISTORY 12. ROMAN HISTORY: The early Roman Republic; Roman conquest; civil strifes; The Empire—its rise and decline; civilizing influence. An attempt is made to give a more adequate understanding of Rome, its religion, philosophy, literature, jurisprudence and commerce. Open to all undergraduates. (Two hours, one term.)

HISTORY 13. MEDIEVAL HISTORY: The Middle Ages; rise of the Frankish Kingdom; Charlemagne and his successors; England and Germany to the end of the fifteenth century; Feudalism; contest between Pope and Emperor; Scholasticism; Inventions of the Middle Ages. Emphasis will be placed upon those ideas, events and institutions that seem to have been of most significance. Open to Juniors and Seniors. (Three hours, both terms.)

HISTORY 14. CONSTITUTIONAL HISTORY OF THE UNITED STATES: Colonial governments, the confederation, the federal constitution, National vs. State Sovereignty, War of 1813, federal judiciary, nullification act, state constitutions, the Civil War. Open only to Freshmen and Sophomores. (Three hours, one term.)

HISTORY 15. MODERN HISTORY: This course covers the periods spoken of as the Renaissance, the Reformation, and Modern Europe. It deals with the causes, scope and influence of the Renaissance; the reform and counter-reform of the sixteenth century; the age of Louis XIV; the monarchistic and democratic movements of continental and insular Europe during eighteenth and nineteenth centuries; the World War. Open to all undergraduates. (Three hours, one term.)

HISTORY 16. PHILOSOPHY OF HISTORY: The meaning of history; the theoretical and practical determinants in the adequate interpretation of historical facts, the study of European Civilization based principally upon works of Balmes, Schlegel, Allies and Belloc. Prerequisites, Junior or Senior standing. (Three hours, one term.)

HISTORY 17. AMERICAN POLITICAL INSTITUTIONS: Nature of state and national systems; organization and powers of legislative, executive and judicial departments of the Federal Government. Prerequisites, not open to students who have taken or are taking History fourteen. (Three hours, one term.)

HISTORY 18. ANGLO-AMERICAN CONSTITUTIONAL HISTORY: Aims to explain the governmental system of England in its historical development and pays particular attention to the distinctive characteristics of England's Constitution. Describes the transit of English political institutions to America and their evolution in the United States, emphasizing the formation and development of our constitutional law. This course will meet the needs of students who are looking forward to Law. (Three hours, both terms.)

Graduate Course

HISTORY 101. MEDIEVAL INSTITUTIONS: A discussion of some of the more important institutions of its Middle Ages. (Two hours, both terms.)

HISTORY 102. HISTORY OF THE PEOPLE OF THE UNITED STATES: This course deals with the social and intellectual development with special reference to its influence upon the political history of the people of the United States of America. (Two hours, both terms.)

HISTORY 103. MODERN HISTORY: Topics in Modern History. World conditions and events from reformation to the present time. (Two hours, both terms.)

HISTORY 104: CHURCH HISTORY: History of the church from the Apostolic Age to the present time. (Two hours, both terms.)

Latin and Greek

The undergraduate courses in Greek and Latin aim to develop in the student the power of appreciating as art the masterpieces of classical literatures and of comprehending their relation to ancient and modern life. As a means to the study of the great masterpieces, the courses embrace a thorough study of the grammar, history, translation from English into Latin, as well as grammatical analysis of the authors read. Special attention is given to the influence of these languages upon the mother tongue.

The study of Greek is obligatory in the Classical Course.

Latin

LATIN 1. ELEMENTARY LATIN: This course is intended for those who do not present Latin at entrance. Practice in English-Latin and Latin-English exercises. (Four hours, both terms.)

LATIN 2. CÆSAR: Reading Cæsar's Gallic Wars, Books I-IV with reference to the syntax used by the author. (Four hours, both terms.)

LATIN 3. CICERO ORATIONS AGAINST CATILINE: Syntax of sentences, nouns, adjectives, pronouns and verbs. (Three hours, both terms.)

LATIN 4. VERGIL: AENEID: Word order and sentence structure. The rules of Latin prosody. (Three hours, both terms.)

LATIN 5. PROSE COMPOSITION: Based on Cæsar. May be taken in connection with Latin 2 but not separately. (One hour, both terms.)

LATIN 6. PROSE COMPOSITION: Based on Cicero. May be taken in connection with Latin 3 but not separately. (One hour, both terms.)

NOTE: No credit towards a degree for courses marked 1 to 6 inclusive.

LATIN 11. LIVY, SELECTIONS. Prerequisite, four units of Elementary Latin at entrance. (Three hours, one term.)

LATIN 12. HORACE, SELECTED ODES AND EPODES. Prerequisite, Latin 11. (Three hours, one term.)

LATIN 13. HORACE, SATIRES AND EPISTLES. Prerequisite, Latin 11. (Two hours, one term.)

LATIN 14. PROSE COMPOSITION. First course. May be taken in connection with Latin 11, 13 but not separately. Prerequisite, as for Latin 13. (One hour, both terms.)

LATIN 15. CICERO, DE SENECTUTE, DE AMICITIA, AND DE OFFICIIS. Prerequisite, Latin 11, 12 or 13. (Two hours, one term.)

LATIN 16. SELECTIONS FROM TACITUS' ANNALS. SELECTIONS FROM SALLUST. Prerequisite, as for Latin 15. (Three hours, one term.)

LATIN 17. ROMAN COMEDY. Three plays of Plautus and Terence. Prerequisite, Latin 12 or 13. (Three hours, one term.)

LATIN 18. PROSE COMPOSITION. Advance course. May be taken in connection with Latin 15, 17. Prerequisite, Latin 14. (One hour, one term.)

LATIN 19. COURSE IN SIGHT READING. This course is intended to give students a greater facility in reading Latin at sight. Selections will be taken from the following list: Cicero, Letters; Cæsar, Gallic War, Books V-VII and Civil War; Nepos, Lives; Vergil, Aeneid, Books VII-XII; Ovid, Metamorphoses. Prerequisites, as for Latin 15. The course may be taken for two years. (Three hours, one term.)

NOTE: Courses marked from 21 to 23. No knowledge of Latin is required. Prerequisites, Sophomore standing.

LATIN 21. LATIN LITERATURE with an introduction on the Language. (Three hours, one term.)

LATIN 22. ROMAN LIFE: Taking up such topics as administration, commerce, communication, family and social life. (Three hours, one term.)

LATIN 23. HISTORY OF ROME: Political and social history of Rome, and taking up such topics as art, religion, philosophy, architecture, science, and political and social institutions. (Three hours, one term.)

Graduate Course

LATIN 101. CICERO: Tusculan Disputations. A rapid reading course; lectures and reports. (Three hours, one term.)

LATIN 102. LUCRETIUS: A study of the *De Rerum Natura* as to its philosophical and literary aspects. (Three hours, one term.)

LATIN 103. ST. AUGUSTINE: The primary aim of this course is to give a general knowledge of the literary activities of St. Augustine. Emphasis will be placed on the *De Civitate Dei*. (Three hours, one term.)

LATIN 104. LATIN COMPOSITION: Advanced prose, composition and elementary verse composition. (One hour, both terms.)

Greek

GREEK 1. ELEMENTARY COURSE: This course is conducted throughout for those who do not present Greek at entrance. Systematic study of sounds, breathings, accent, forms and syntax. (Four hours, both terms.)

GREEK 2. XENOPHON: Xenophon, *Anabasis*. Book I-IV together with further drill in forms and syntax and composition. (Three hours, both terms.)

GREEK 3. HOMER: Homer's *Iliad*. Book I-IV. Homeric forms, constructions and prosody are studied. (Three hours, both terms.)

GREEK 4. PROSE COMPOSITION: May be taken in connection with Greek 2. (One hour, both terms.)

NOTE: No credit towards a degree for courses marked from 1 to 4.

GREEK 11. PLATO, *Apology*; Euripides, *Alcestis*. Prerequisite, Greek 1 to 4 or the equivalent. (Two hours, one term.)

GREEK 12. PROSE COMPOSITION: First course. May be taken in connection with any course in Greek 11 and up, but not separately. Prerequisites, as for Greek 11. (One hour, both terms.)

GREEK 13. EURIPIDES, SOPHOCLES. Prerequisite, Advanced Greek at entrance or Greek 11. (Two hours, one term.)

Greek 14. HERODOTUS, THUCYDIDES. Prerequisite, as for Greek 13. (Three hours, one term.)

GREEK 15. AESCHYLUS, ARISTOPHANES. Prerequisite, Greek 13 and 14. (Three hours, second term.)

GREEK 16. NEW TESTAMENT: The Synoptic Gospels. Prerequisite, Greek 15. (Two hours, both terms.)

GREEK 17. PROSE COMPOSITION: Advanced course. May be taken in connection with any other course but not separately. Prerequisite, Greek 12. (One hour, both terms.)

GREEK 21. GREEK LITERATURE: The History of Greek Literature. Literature and collateral reading in English translation. (Two hours, two terms.)

GREEK 22. HISTORY OF GREECE TO THE DEATH OF ALEXANDER THE GREAT. (Three hours, one term.)

GREEK 23. SURVEY OF GREEK CIVILIZATION. (Three hours, one term.)

Graduate Course

GREEK 101. ARISTOTLE: The politics. A study of the political and economic writings of Aristotle, and of the social and political thought of Greece. (Three hours, one term.)

GREEK 102. DEMOSTHENES: A study of the life of Demosthenes; particularly as set forth in his own works. (Three hours, one term.)

GREEK 103. GREEK COMEDY: Survey of Greek comedy. Lectures, study of select plays, collateral reading, and research. (Three hours, one term.)

GREEK 104. ST. JOHN CHRYSOSTOM: The primary aim of this course is to give a general knowledge of the literature of St. John Chrysostom. (Three hours, one term.)

GREEK 105. ADVANCED GREEK COMPOSITION. (One hour, both terms.)

Mathematics

The courses in this department are arranged to meet the needs of those students who are studying mathematics as a valuable element in a scheme of liberal education, and especially of those for whom it forms a necessary foundation for work in pure science or engineering.

For admission to its elementary courses a thorough knowledge of algebra, through quadratics, and of plane geometry, is required.

Under Graduate Courses

MATHEMATICS 1. ADVANCED ALGEBRA. (Three hours, first term.)

MATHEMATICS 2. TRIGONOMETRY. (Three hours, second term.)

MATHEMATICS 3. ANALYTIC GEOMETRY. (Three hours, both terms.)

MATHEMATICS 4. DIFFERENTIAL AND INTEGRAL CALCULUS: Elementary Course. Prerequisite, Mathematics 1 and 2. (Three hours, one term.)

MATHEMATICS 5. DIFFERENTIAL AND INTEGRAL: Calculus, second course. Prerequisite, Mathematics 4, required. (Three hours, one term.)

Graduate Course

ANALYTIC GEOMETRY of three dimensions. Mathematics 4 required.

ADVANCED CALCULUS AND DIFFERENTIAL EQUATIONS. Mathematics 5 required.

FUNCTIONS OF A COMPLETE VARIABLE.

THEORY OF STATISTICS. Mathematics 5 required.

THEORY OF FINITE GROUPS: Metric Geometry. Theory of Invariants.

ELLIPTIC FUNCTIONS: Calculus of Observations. Differential Geometry. Line Geometry. Infinite Processes.

Mechanics

The work of this department embraces both theoretical and experimental Mechanics.

The theoretical instruction requires no previous knowledge of Mechanics; the advanced courses presume a fair acquaintance with Physics and sufficient Mathematical training to read profitably the standard work on Mechanics.

MECHANICS 1. ELEMENTARY MECHANICS: The fundamental ideas of Mechanics. Prerequisites, Mathematics 2 and Physics 1. (Three hours, one term.)

MECHANICS 2. THEORETICAL MECHANICS: A course designed to give the student a firm grasp of

the fundamental principles of Mechanics. Prerequisites, Mathematics 4 and Physics 1. (Three hours, one term.)

MECHANICS 3. APPLIED MECHANICS: A course in mechanics of materials. Supplemented by numerous tests in the laboratory. Prerequisites, Mathematics 4 and Mechanics 2.

MECHANICS 4. MATERIALS OF CONSTRUCTION: The physical characteristics of Construction used by the engineer.

Graduate Courses

MECHANICS 5. ANALYTIC MECHANICS: Mechanics in a more exhaustive way than Course 2. Mathematics 4 required.

MECHANICS 6. Mechanics 4. Vector Analysis. Mathematics 4 and Mechanics 2 required.

Philosophy

PHILOSOPHY 1. INTRODUCTION TO PHILOSOPHY: A general view of the field of philosophy. The principal problems in psychology, logic and metaphysics. The more important philosophical systems reviewed historically and critically. (Three hours, one term.)

Dubray, *Introductory Philosophy*.

PHILOSOPHY 2. FORMAL LOGIC: Logic, an art and a science. Importance; relation to other sciences. Mental images. Terms. Definition. Division. Judgments and propositions. Reasoning. The syllogism; its value and rules. Fallacies. Applications of logic. (Three hours, one term.)

Turner, *Lessons in Logic*.

Brothers of the Christian Schools, *Elementary Course in Philosophy*.

PHILOSOPHY 3. METHOD: Truth, Certitude, Doubt, Probability. General principles of method. Analysis and synthesis. Deduction and induction. Methods of observation and experimentation. Hypothesis; theory; law; science. Classification of sciences. Methods of the special sciences. (Two hours, one term.)

Brothers of the Christian Schools, *Elementary Course in Philosophy*.

PHILOSOPHY 4. EPISTEMOLOGY: The possibility of certainty. Scepticism. Veracity of the senses and the intellect. Idealism vs. Realism. Universals. Authority and belief. Critical examination of various theories of knowledge. (Two hours, one term.)

Poland, *The Truth of Thought*.

Rickaby, *First Principles of Knowledge*.

PHILOSOPHY 5. ONTOLOGY: Aristotelian transcendentials of being. Realty of substances. Causation. Errors concerning causation. Divisions of being. (Two hours, one term.)

Coffey, *Ontology*.

Brothers of the Christian Schools, *Elementary Course of Philosophy*.

PHILOSOPHY 6. COSMOLOGY: Nature, origin, and duration of the universe. Ultimate constituents of bodies. Hylomorphism. Laws of nature as applied both to the organic and the inorganic world. Possibility of miracles. Concepts of natural science and scholastic philosophy. (Two hours, one term.)

Mercier, *A Manual of Modern Scholastic Philosophy*, Vol. 1.

PHILOSOPHY 7. DESCRIPTIVE PSYCHOLOGY: The Nervous System. Neural action in relation to consciousness. Sensation. Perception. Memory. Imagination. Reasoning. Instinct. Feeling. Emotions. Action and Will. Spirituality and immortality of the soul. (Two hours, both terms.)

Pillsbury, *Essentials of Psychology*.

Maher, *Psychology*.

PHILOSOPHY 8. EXPERIMENTAL PSYCHOLOGY: Elements and general methods. Elements of mental life; sensation, feeling, conation. Experiments on the outer senses and on the association of ideas, with special application to pedagogy. (Two hours, both terms.)

PHILOSOPHY 9. CHILD PSYCHOLOGY: (a) Infancy and Childhood. (b) Adolescence. (One hour, both terms.)

PHILOSOPHY 10. NATURAL THEOLOGY: Proof of God's existence and providence; Deism, pantheism, agnosticism, atheism. Existence of evil. Preservation of creatures. Divine concurrence. (Two hours, one term.)

Clarke.

PHILOSOPHY 11. GENERAL ETHICS: Nature of a human act. Ultimate end of human actions. Determinants of morality. Does the end justify the means? Hindrances to the perfection of a human act. The passions, habit, virtue, vice. (Two hours, both terms.)

Hill.

PHILOSOPHY 12. SPECIAL ETHICS: Man's rights and duties as an individual. Man's duties to God:

adoration, love, obedience. Man's duties to his neighbor. Suicide and dueling.

Man's rights and duties as a citizen. The common law of nations. Ecclesiastical society. Mission of the church in the modern world. (Two hours, both terms.)

PHILOSOPHY 13. HISTORY OF PHILOSOPHY: Principles of the founders of the ancient schools; their vitality as illustrated in modern views. Medieval philosophy; special emphasis upon scholasticism. Modern Philosophy. Neo-Scholastic movement. (Three hours, first term.)

Turner, *History of Philosophy*.

PHILOSOPHY 14. PHYSIOLOGICAL PSYCHOLOGY: The Physiological basis of mind. The central nervous system in its structural and functional relations to mental phenomena. The doctrine of cerebral localizations. The function of brain and sense organ activity. (Three hours, second term.)

Physics

This department furnishes opportunity for instruction and research in various branches of physics. Its purpose is two-fold:

1. To give students of any other department such an acquaintance with the principles and facts of physics and with the methods of exact physical measurements, as may be deemed requisite for the intelligent pursuit of their chief work.

2. To give students of this department a comprehensive knowledge of theoretical and experi-

mental physics and a training in the methods of research that will fit them to pursue original work.

Instruction is given by means of lectures, conferences, problems, laboratory practice, seminars and such other academic devices as may be deemed necessary.

The physical laboratory provides good opportunity for the usual experiments and for original research.

PHYSICS 1. GENERAL THEORETICAL AND EXPERIMENTAL PHYSICS: Mechanics, sound, light, heat, electricity and magnetism. Lectures with demonstrations. Measurements of the principal physical quantities in the laboratory. Prerequisites, Mathematics 1 and 2. (Six hours, both terms.)

PHYSICS 2. MAGNETISM AND ELECTRICITY: Parts of magnetism, electromagnetism, electrodynamics, electrostatics and electrokinetics. Lectures, measurements in the laboratory of direct current, magnetic and electrical quantities. Prerequisites, Physics 1 and Mathematics 4. (Six hours, one term.)

PHYSICS 3. SIMPLE HARMONIC MOTION, ELASTICITY: The more important experiments in simple harmonic motion: determination of elastic constants; theory of precise measurements and applications to laboratory work. Prerequisites, Physics 1 and Mathematics 4. (Six hours, one term.)

PHYSICS 4. PHYSICAL OPTICS: This course is for students who have had one year's work in college physics. Prerequisite, Physics 1. (Six hours, one term.)

PHYSICS 5. CONDUCTION OF ELECTRICITY IN GASES, X-RAYS AND RADIOACTIVITY.—Ionization, phenomena in gases at low pressure, cathode ray, X-rays, radiations from active substances, quantum theory, atomic structure, crystal structure, series spectra. Prerequisite, Physics 1. (Four hours, one term.)

PHYSICS 6. ELECTRIC OSCILLATIONS, ELECTRIC WAVES: Theory, application to radiotelegraphy and radiotelephony. Oscillations, detectors, amplifiers. Prerequisites, Physics 1 and Mathematics 4. (Four hours, one term.)

PHYSICS 7. This course includes intensive work in applied Bio-Physics. Will stress the Physics of Light Therapy and will cover the Physics of Quartz Light, Ultra-Violet Rays and Roentgen Rays. Will also cover the Biological value of Galvanic, Faradic, Sinusoidal, Electro Thermal and cautery currents.

This course is especially intended for pre-medical and pre-dental students in preparation for their course in Physical Therapy. (One hour, two terms.)

Graduate Courses

PHYSICS 8. MATHEMATICAL PHYSICS. Mathematics 4 and Physics 1 required.

PHYSICS 9. RESEARCH. Physics 1 and other qualifications to be determined for each applicant required.

PHYSICS 10. PHYSICAL SEMINAR. Physics 1 and other qualifications to be determined for each applicant required.

Religion

RELIGION 1. DOGMA: Explanation of the principal dogmas, with special insistence on the continuity of the Church. The Church and science. Objections. History of the Old Testament. (Two hours, both terms.)

Christian Brothers, *Manual of Christian Doctrine*, Part I.

RELIGION 2. MORALS: Explanation of the fundamental principles of Christian morality as contained in the Decalogue. History of the New Testament. (Two hours, both terms.)

Christian Brothers, *Manual of Christian Doctrine*, Part II.

RELIGION 3. WORSHIP: Grace, prayer and the sacraments, with special reference to the Council of Trent and the tenets of Protestantism. History of the Church. (Two hours, both terms.)

Christian Brothers, *Manual of Christian Doctrine*, Part III.

RELIGION 4. APOLOGETICS I: Natural Theology. See Philosophy 10. (Two hours, both terms.)

RELIGION 5. APOLOGETICS II: General ethics. Special ethics. See Philosophy 11 and 12. (Two hours, both terms.)

RELIGION 6. OLD TESTAMENT HISTORY: The possibility, necessity, and signs of revelation. The Patriarchal regime; the call of Moses; the period of the Judges; the foundation of the Judaic kingdom;

divisions in supremacy; the kingdom of Juda; the kingdom of Israel; captivities; the fullness of time. (Two hours, one term.)

RELIGION 7. NEW TESTAMENT HISTORY: The life of Christ as portrayed in the four gospels; the mission of the apostles as related in the Acts of the Apostles; the teachings of the apostles as expressed in the epistles; the prophecies as contained in the Apocalypse. (Two hours, one term.)

RELIGION 8. CHURCH HISTORY: From the founding of the Church to the Reformation; the Patristic period; the period of apparently subdued activity; the Scholastic period; the Renaissance. The Protestant Reformation and Catholic Reaction; the Council of Trent. Discoveries, explorations, and Catholic missions and missionaries. The temporal and moral influence of the Papacy. (Two hours, one term.)

ACADEMIC COSTUME

The following prescribed academic costume is ordered to be worn upon all appropriate occasions, as indicating the several degrees and the faculties to which they pertain :

GOWNS

1. **PATTERN.** Those commonly worn, with pointed sleeves for the Bachelor's degree and for the degrees of Doctor of Medicine, Doctor of Public Hygiene, Doctor of Dental Surgery and Doctor of Veterinary Medicine; with long, closed sleeves for the Master's degree; and with round, open sleeves for the degrees of Doctor of Philosophy, Doctor of Divinity, Doctor of Letters, Doctor of Science, Doctor of Music, Doctor of Fine Arts and Doctor of Laws.

2. **MATERIAL:** Worsted stuff for the Bachelor's degree and for the Doctor of Medicine, etc.; silk for the Master's and Doctor's (Philosophy, Divinity, etc.).

3. **TRIMMINGS:** For the Bachelor's and Master's degrees the gowns are untrimmed. For the Doctor's degree, (exclusive of those in Medicine, etc.), the gown is to be faced down the front with black velvet, with three bars of the same color across the sleeves; or the facings and crossbars may be of velvet of the same color as the binding or edging of the hood, being distinctive of the faculty to which the degree pertains.

HOODS

1. PATTERN: The pattern usually followed by colleges and universities save as modified below.

2. MATERIAL: The same as that of the gown.

3. COLOR: Black, except for the degrees of Doctor of Laws, Doctor of Science, Doctor of Letters, Doctor of Divinity, Doctor of Music and Doctor of Fine Arts, granted "in honoris causa" when the hood shall be scarlet.

4. LENGTH: The length and form of the hood will indicate the degree, as follows: For the Bachelor's degree, the length shall be three feet; for the Master's degree, the length shall be four feet; and for the Doctor's degree (exclusive of those in Medicine, etc.), the length shall be the same (*i. e.*, four feet) but shall have panels at the sides.

5. LINING: Blue and gold silk, arranged in the form of a chevron.

6. TRIMMINGS: The edging to be three inches in width for Bachelor's, and four inches for Master's and Doctor's (exclusive of those in Medicine, etc.) degrees, of velvet, the color to be distinctive of the faculty to which the degree pertains: Arts and Letters, *white*; Science, *gold yellow*; Fine Arts, *brown*; Music, *pink*; Theology, *scarlet*; Philosophy, *dark blue*; Law, *purple*; Medicine and Public Hygiene, *green*; Dentistry, *lilac*; Veterinary Medicine, *gray*; Library Science, *lemon yellow*.

CAPS

The caps shall be of the material and form generally used and commonly called "mortar board" caps. The color shall be black. The Doctor's cap shall be trimmed with velvet. Each cap shall be ornamented with a long tassel attached to the middle point at the top. The tassel of the Doctor's cap (exclusive of those in Medicine, etc.) may be, in whole or in part, of gold thread. The tassel shall be worn on the right side of the cap by candidates for degrees, to be changed to the left side upon the conferring of the degree.

The President, Vice-President, Deans and Vice-Deans may adopt distinctive modifications, not inconsistent with the costume hereinbefore described and with the Rules of the Christian Brothers.

Secular members of the several faculties may wear gowns while delivering formal class lectures.

PRIZES

1. The Ryan purse of \$25 is offered by Sir James J. Ryan, G. C. S. G., to the student of the Senior Class who has the best record of scholarship in the regular work of the year.

2. The Cardinal Dougherty Prize for Oratory, the gift of His Eminence D. Cardinal Dougherty, D. D., is open to all college students.

SCHOLARSHIPS

The Henry T. Coleman Scholarship, founded by the late Henry T. Coleman, Esq., in 1903.

The William F. Harrity Scholarship, founded by the late Hon. William F. Harrity, in 1913.

**THE
LA SALLE COLLEGE ALUMNI ASSOCIATION**

The Alumni Association has been organized to foster among its members a spirit of loyalty to their Alma Mater and to hold them together by a common bond of fellowship.

Regular meetings and re-unions are held from time to time as prescribed in the rules and by-laws of the society.

ERRATA

- Page 34, 3d paragraph, line 1:
Anthopology should be Anthropology.
- Page 36, 2d paragraph, line 5:
techncial should be technical.
- Page 38, 2d paragraph, line 4:
metalbolism should be metabolism.
- Page 41, 5th paragraph, line 5:
hour should be hours.
- Page 43, 2d paragraph, line 3:
economics should be economic.
- Page 45, 1st paragraph, line 2:
six should be sex.
- Page 47, 3d paragraph, line 9:
works should be work.
- Page 52, 4th paragraph, line 2:
romantictists should be romanticists.
- Page 55, 1st paragraph, line 1:
au should be aux.
- Page 55, 1st paragraph, line 1:
Lâ tache should be La tâche.
- Page 55, 4th paragraph, line 5:
sous should be sans.
- Page 56, 1st paragraph, line 3:
Deus should be Deux.
- Page 69, 6th paragraph, line 2:
realty should be reality.

